CLAIMS

1. A method for measuring interference power in a time slot code division multiple access system, comprising: A. performing channel estimation for received signals with channel estimation codes, to obtain the original channel response estimation results $\underline{h}_i, i = 1 \cdots P$, wherein P is the total length of the channel estimation window; characterized in that the method further comprises:

B. predetermining a threshold of number of taps W_1, and selecting channel response estimation results corresponding to W_1 taps with less power from the original channel response estimation results $\underline{h}_i$ according to the threshold of number of taps W_1 as a roughly estimated result of the interference power; and

C. performing threshold processing on the original channel response estimation results with a signal-to-noise ratio threshold post-processing method by using the roughly estimated result of the interference power and a predetermined signal-to-noise ratio threshold, to obtain an accurate measured result of the interference power.

2. A method for measuring interference power in a time slot code division multiple access system according to claim 1, wherein said threshold of number of taps W_1 is less than the number of taps of the actual interference responses available.

3. A method for measuring interference power in a time slot code division multiple access system according to claim 2, wherein said threshold of number of taps W_1 is in a range of 50 to 90.

4. A method for measuring interference power in a time slot code division multiple access system according to claim 3, wherein said threshold of number of taps W_1 is 80.

5. A method for measuring interference power in a time slot code division multiple access system according to claim 1, wherein in step B, the roughly estimated result of the interference power σ_{n1}^2 is obtained with equation $\sigma_{n1}^2 = \frac{P}{D \cdot W_1} \sum_{i=1}^{P} \left| \underline{h'}_i \right|^2$, wherein $\underline{h'}_i$ is the channel response estimation results for W_1 taps, and D is the noise degradation factor of the corresponding channel estimation code.

6. A method for measuring interference power in a time slot code division multiple access system according to claim 1, wherein step C of performing threshold processing on the original channel response estimation results with a signal-to-noise ratio threshold post-processing method further comprises:

C1. obtaining the compensated threshold of the interference power Γ_{CHE} with equation $\Gamma_{CHE} = \frac{\sigma_{n1}^2 \varepsilon_{CHE}}{P\beta}$ according to the predetermined signal-to-noise ratio threshold ε_{CHE}, the compensation value β, and the roughly estimated result of the interference power σ_{n1}^2;

C2. selecting channel response estimation results corresponding to W_2 taps with the power lower than the threshold of the interference power Γ_{CHE} from the original channel response estimation results as the interference response

results $\underline{h}_i''$ of the signal-to-noise ratio threshold post-processing;

C3. obtaining the accurate measured value of the interference power with equation $\sigma_n^2 = \frac{P}{D \cdot W_2} \sum_{i=1}^{P} \left| \underline{h}''_i \right|^2$, wherein D is the noise degradation factor of the corresponding channel estimation code.

7. A method for measuring interference power in a time slot code division multiple access system according to claim 6, wherein said signal-to-noise ratio threshold ε_{CHE} is in a range of 3 to 5, and wherein said compensation value β is provided for the lower roughly estimated result of the interference power and is in a range of 0.30 to 0.60.

8. A method for measuring interference power in a time slot code division multiple access system according to claim 7, wherein said signal-to-noise ratio threshold ε_{CHE} is 4, and said compensation value β is 0.41.